Progress Report

SITE NAME: South Tacoma Field (STF), Tacoma, Washington

PREPARED BY: Kennedy Jenks

REPRESENTING: BNSF Railway Company & Amsted Industries

DATE: 7 March 2022 for Reporting Year 2021

REPORTING PERIOD:

a. Progress made this reporting period, including problems encountered and recommendations:

Actions completed at the South Tacoma Field (STF) (Site) in 2021 included submittal of two groundwater attainment analyses of site groundwater cleanup levels (CULs), decommissioning four wells (NWM-17A1, NMW-10A, STM-1A1, and STM-3A1), annual groundwater monitoring of well NMW-1A, and a cap inspection. Well locations are shown on Figures 1 and 2.

Site groundwater CULs were established in the Record of Decision (ROD) and have been amended or supplemented in subsequent 5-Year Reviews. Safe Drinking Water Maximum Contaminant Levels (MCLs) were identified as applicable, relevant, and appropriate requirements (ARARs). Where MCLs were not available, Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) groundwater CULs were used (ROD 6.8.2 10.2.1).

Groundwater CUL Attainment and Well Decommissioning

A letter titled *Groundwater Attainment Analysis and Proposed Well Decommissioning – South Consolidation Area* was submitted to United States Environmental Protection Agency (EPA) on 4 February 2021 requesting to decommission wells STM-1A1 and STM-3A1 in the south consolidation area. In an EPA letter dated 8 March 2021, EPA agreed that groundwater in wells STM-1A1 and STM-3A1 had reached attainment of Site CULs protective of human health and the environment and were approved for decommissioning.

A letter titled *Groundwater Attainment Analysis, Proposed Well Decommissioning – Pioneer Builders Supply Area* was submitted to EPA on 12 February 2021 requesting to decommission two wells, NMW-1A and NMW-10A, in the Pioneer Builder Supply Area (Pioneer). In an EPA letter dated 16 March 2021, EPA agreed that groundwater in well NMW-10A had reached attainment of CULs protective of human health and the environment and was approved for decommissioning. EPA found that groundwater at NMW-1A had not reached attainment of the CULs for benzene, 1,4-dichlorobenzene, and 1,2,4-trichlorobenzene and monitoring should continue.

Monitoring Frequency Modification

On 22 March 2021, BNSF requested via email a decrease in the sampling frequency at well NMW-1A from quarterly to annual. EPA approved the requested change in sampling frequency in an email dated 22 March 2021.

A *Revised Groundwater Monitoring Plan – South Tacoma Field OU* was submitted to EPA on 23 March 2021 and subsequently approved in an email dated 27 March 2021. The revised groundwater monitoring plan reduced the sampling frequency at well NMW-1A to annual for benzene, 1,4-dichlorobenzene, and 1,2,4-trichlorobenzene. Groundwater monitoring was discontinued at the following wells:

- South consolidation area wells STM-1A1 and STM-3A1
- Pioneer well NMW-10A.

Well Decommissioning

Wells STM-1A1, STM-3A1, NMW-10A, and NMW-17A1 were decommissioned on 17 June 2021. Wells STM-1A1, STM-3A1, and NMW-10A were decommissioned in accordance with the work plan dated 6 December 2019. Well NMW-17A1 was decommissioned in accordance with the amended work plan dated 10 September 2020 (details were provided in the 2021 annual report).

Annual Groundwater Monitoring Event

Following well decommissioning activities in June 2021, Pioneer well NMW-1A is the one remaining well at the Site. The annual groundwater monitoring event was conducted in accordance with the *Revised Groundwater Monitoring Plan – South Tacoma Field OU* dated 23 March 2021 on 9 December 2021. The event included collecting groundwater level measurements and groundwater samples from well NMW-1A for laboratory analysis of benzene, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, gasoline-, diesel-, and oil-range organics (GRO, DRO, and ORO).

Groundwater elevations are summarized in Table 1 and laboratory analytical results are summarized in Table 2 for well NWM-1A.

In the groundwater samples collected from well NMW-1A, benzene, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, GRO, ORO, and DRO were reported below the lowest of the Site CULs and/or MTCA Method A or B CULs.

Cap Inspection

A portion of the Site was sold to Bridge Development Partners, LLC (BRIDGE) in 2021, as shown on Figure 1, and includes the BNR Dismantling Yard and grids 452, 453, 460, 461, 493, 494, 500, 501, 520, 532, 533, 538, 550, 554, 586, 703, 767, 785, and 879. Per the sale agreement, BRIDGE is responsible for conducting inspections, performing maintenance, and annual reporting for their portion of the Facility.

In December 2019, EPA approved of BNSF and Amsted decreasing cap inspections to a rolling 18-month cycle. A cap inspection was conducted in December 2021 and excluded the portion of the Site sold to Bridge, as shown on Figure 1. During the cap inspection,

minor ponding was observed in a few of the maintenance grids; however, there were no signs of erosion. Most of the monuments within the maintenance grid were found. In general, the soil caps were intact and functioning. The cap inspection summary table is included as an attachment to this report.

A fence break was noted along South Proctor Street during the December 2021 inspection. Fence repairs are schedule to occur during 2022.

b. Anticipated problem areas and recommended solutions, including technical and scheduling information:

Well security and fencing conditions will continue to be monitored during the annual sampling activities and cap inspections. The cap inspections will occur on a rolling 18-month cycle. The next inspection for the 18-month cycle is scheduled for June 2023.

c. Problems resolved including results obtained relating to previously identified problem areas.

None were identified.

d. Deliverables submitted, including dates of completion, deliverable anticipated to be submitted with next report, and reasons due dates for any future deliverables may need to be revised. Delays should be fully explained:

Deliverables submitted to EPA in 2021 are listed below.

- The *Groundwater Attainment Analysis and Proposed Well Decommissioning – South Consolidation Area* was submitted to EPA on 4 February 2021.
- The *Groundwater Attainment Analysis, Proposed Well Decommissioning – Pioneer Builders Supply Area* was submitted to EPA on 12 February 2021.
- The *Revised Groundwater Monitoring Plan South Tacoma Field OU* was submitted to EPA on 23 March 2021.

Planned deliverables for 2022 include:

A combined BNSF Site Development and Institutional Controls Plan (SDIC) and O&M plan to be revised and resubmitted (per EPA comments). The report submittal was delayed due to the BRIDGE sale.

e. Upcoming event/activities planned, including field surveys, meetings, etc., and all major tasks to be performed within the next reporting period:

- Conduct annual groundwater monitoring of well NMW-1A in December 2022.

f. Key staffing changes, including consultant, contractor, or subcontractor personnel:

Meagan Henderson has replaced Julia Schwarz as the Kennedy Jenks (consultant) project manager. Her contact information is below.

Meagan Henderson
9393 W. 110th Street, 5th Floor, Overland Park, KS 66210
Direct Phone: (913) 643-4947
Email: MeaganHenderson@kennedyjenks.com

g. Reports, including identification of daily reports, inspection reports, laboratory/monitoring data, etc., that are available for review if requested by EPA:

Tables 1 and 2 summarize groundwater elevations and analytical results. The laboratory analytical reports are available electronically upon request. The December 2021 cap inspection report is attached.

Tables

Table 1: Depth to Groundwater and Groundwater Elevations - Well NMW-1A
South Tacoma Field Site

Well Designation	Date of Measurement	Top of Casing Elevation (feet above MSL)	Measured Depth to Water (feet from top of casing)	Groundwater Elevation (feet above MSL)
Pioneer Builders Supply Monitoring Well				
NMW-1A	May 1999	252.66	30.66	222.00
	August 1999	252.66	31.08	221.58
	1/21/2000	252.66	29.22	223.44
	October 2001	252.66	32.01	220.65
	October 2002	252.66	31.96	220.70
	12/29/2004	252.66	34.17	218.49
	1/10/2006	252.66	32.84	219.82
	1/11/2007	252.66	30.58	222.08
	12/26/2007	252.66	29.86	222.80
	12/21/2010	252.66	25.72	226.94
	1/25/2012	252.66	25.09	227.57
	12/27/2012	252.66	23.51	229.15
	1/30/2014	252.66	27.12	225.54
	12/19/2014	252.66	25.66	227.00
	1/6/2016	252.66	28.96	223.70
	12/06/2016	252.66	25.08	227.58
	12/04/2017	252.66	23.34	229.32
	1/31/2019	252.66	25.77	226.89
	5/22/2019	252.66	25.84	226.82
	7/19/2019	252.66	26.89	225.77
	12/11/2019	252.66	27.21	225.45
	3/20/2020	252.66	25.31	227.35
	5/28/2020	252.66	25.61	227.05
	9/21/2020	252.66	26.73	225.93
	12/7/2020	252.66	26.41	226.25
	12/9/2021	252.66	26.98	225.68

Note:
MSL = mean sea level

Table 2: Groundwater Analytical Results - Well NMW-1A
South Tacoma Field Site

Kennedy Jenks

Monitoring Well	Date Sampled	Petroleum Hydrocarbons (mg/L)			Volatile Organic Compounds (µg/L)														
		Gasoline Range Organics	Diesel Range Organics	Oil Range Organics	Benzene	Toluene	Ethyl-benzene	Total Xylenes	n-Butylbenzene	sec-Butylbenzene	tert-Butyl-benzene	p-Isopropyl-toluene	1,2-Dichloro-benzene	1,3-Dichloro-benzene	1,4-Dichloro-benzene	1,3,5-Trimethyl-benzene	1,2,4-Trimethyl-benzene	1,2,3-Trimethyl-benzene	Isopropyl-benzene
EPA Maximum Contaminant Level (MCL)		NE	NE	NE	5	1,000	700	10,000	NE	NE	NE	NE	600	NE	75	NE	NE	NE	NE
ROD Cleanup Level		1	1	1	5	1,000	700	10,000	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
MTCA Method A		0.8 (with benzene) 1 (no benzene)	0.5	0.5	5	1,000	700	1,000	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
MTCA Method B (non-carcinogen)		NE	NE	NE	32	640	800	1,600	400	800	800	NE	720	NE	560	80	80	80	NE
MTCA Method B (carcinogen)		NE	NE	NE	0.8	NE	NE	NE	NE	NE	NE	NE	NE	NE	8.1	NE	NE	NE	NE
Pioneer Builders Supply Monitoring Well																			
NMW-1A	October 2001	**3.4/3.4**	<0.250/<0.250	<0.500/<0.500	**3.1/3.2**	**16/16**	**78/80**	**113/113**	**NA**	NA	NA	NA	<1.00/<1.00	NA	**1.1/1.1**	**22/25**	**85/95**	NA	**16/18**
	October 2002	**5.660/5.180**	**0.859/0.910**	<0.500/<0.500	**7.81/7.26**	**38.3/24.5**	**148/116**	**272.3/207.9**	NA	NA	NA	NA	<1.00/<1.00	NA	**4.15/17.4**	**70.7/50.8**	**180/118**	NA	**37.9/32.6**
	12/29/2004	**0.629/0.626**	<0.250/<0.250	<0.500/<0.500	<1.00/<1.00	<1.00/<1.00	**6.50/6.50**	**2.18/2.28**	<1.00/<1.00	**2.57/2.68**	NA	<1.00/<1.00	<1.00/<1.00	**1.29/1.40**	**1.03**/<1.00	<1.00/<1.00	<1.00/<1.00	NA	**9.39/9.66**
	1/10/2006	**3.66/3.66**	<0.301/<0.286	<0.602/<0.505	**6.18/6.23**	**31.5/31.7**	**177/177**	**147/148**	**2.77/2.64**	**4.81/4.91**	NA	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	**8.67/10.7**	**74.8/75.2**	NA	**35.1/35.3**
	1/11/2007	**3.62/3.44**	<0.258/<0.255	<0.515/<0.510	**23.5/24.3**	**36.4/37.1**	**128/130**	**166/167**	**1.95/2.74**	**2.50/2.75**	**0.580/0.640**	**3.57/3.84**	**0.400/0.400**	**1.66/1.79**	**11.1/11.4**	**12.6/12.5**	**58.8/61.9**	NA	**24.0/25.0**
	12/26/2007	**1.51/1.50**	<0.238/<0.250	<0.476/<0.500	**5.61/5.69**	**9.08/9.20**	**64.5/65.1**	**56.6/55.4**	**1.69/1.63**	**3.88/3.81**	**0.660/0.680**	**0.760/0.770**	<1.00/<1.00	**0.880/0.880**	**2.40/2.36**	**3.47/3.06**	**33.8/33.0**	NA	**15.4/15.3**
	12/29/2008	**0.475/0.469**	<0.243/<0.245	<0.485/<0.490	**1.32/1.32**	**2.41/2.43**	**9.96/9.94**	**6.96/6.94**	<1.00/<1.00	**2.06/2.07**	<1.00/<1.00	<1.00/<1.00	**<1.00/<1.00**	<1.00/<1.00	**1.62/1.67**	<1.00/<1.00	**7.32/7.35**	NA	**5.30/5.33**
	1/27/2010	**1.8/1.8**	**0.66/0.68**	<0.240/<0.240	**4.7/5.1**	**19/20**	**28/30**	**44/46**	<1.0/<1.0	**5/5.5**	**0.67/0.73**	<1.0/<1.0	**0.62/0.62**	**4.7/5.2**	**10.0/11.0**	**6.1/6.5**	**120/110**	**3.5**	**32/33**
	12/21/2010	**3.14/3.19**	**0.16/0.16**	<0.380/<0.380	**4.5/4.1**	**24.2/21.2**	**157**	**161/141**	**4.7/4.1**	**6.1/5.3**	<1.0/<1.0	**5.3/4.7**	**1.3/1.3**	**12.7/11.6**	**37.5/34.2**	**14.2/13.1**	**137/123**	<1.0/<1.0	**32.2/28.1**
	1/25/2012	**1.2/1.25**	<0.077/<0.076	<0.380<0.380	<1.0/<1.0	**3.0/2.8**	**36.5/35.6**	**21.9/20.8**	**2.0/2.0**	**3.5/3.6**	<1.0/<1.0	**1.2/1.2**	<1.0/<1.0	**3.3/3.2**	**12.9/12.4**	**4.8/4.6**	**22.4/22.7**	<1.0/<1.0	**8.3/8.2**
	12/27/2012	**0.260/0.220**	<0.100/<0.100	<0.250/<0.250	<1.0/<1.0	<3.0/<3.0	**10/8.9**	**13/11**	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0	**1.3/1.4**	**3.7/3.8**	<1.0/<1.0	**6.6/5.8**	<1.0/<1.0	**1.5/1.4**
	1/30/2014	**1.1/1.2**	**0.60/0.60**	**0.29/0.25**	**2.0/2.2**	**8.5/9.1**	**65/72**	**50/56**	<1.0/<1.0	**1.2/1.5**	<1.0/<1.0	<1.0/<1.0	**3.8/4.0**	**19/21**	**110.0/120.0**	**1.4/1.5**	**31/35**	**2.9/3.0**	**11.0/13.0**
	12/19/2014	<0.100/<0.100	**0.120/0.110**	<0.250/<0.250	<1.00 / <1.00	<5.0/<5.0	<1.0/<1.0	<3.0/<3.0	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0
	1/6/2016	<0.100/<0.100	**0.332 / 0.357**	<0.250/<0.250	<1.00/<1.00	<5.00/<5.00	<1.00/<1.00	<3.00/<3.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	**6.43/6.70**	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00
	12/6/2016	<0.100/<0.100	<0.250/<0.250	<0.500/<0.500	<1.00/<1.00	<5.00/<5.00	<1.00/<1.00	<3.00/<3.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00
	12/4/2017	**0.900/0.610**	**0.345/0.321**	**0.209/0.181**	<1.00/<1.00	**2.09/1.89**	**25.6/22.0**	**17.64/15.09**	<1.00/<1.00	**1.09**/<1.00	<1.00/<1.00	**1.02**/<1.00	<1.00/<1.00	<1.00/<1.00	**3.27/2.59**	<1.00/<1.00	**26.4/21.6**	**2.98/2.50**	**4.56/3.82**
	1/31/2019	**0.294/0.279**	<0.250/<0.250	<0.250/<0.250	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	**1.84/2.05**	<1.00/<1.00	<1.00/**1.12**	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	**4.13/5.45**	<1.00/<1.00	**18.9/23.2**	**2.29/2.66**	**3.46/4.01**
	5/22/2019	**0.324**	**0.449**	<0.250	**1.22**	NA	NA	NA	NA	NA	NA	NA	NA	NA	**32.6/36.2**	NA	NA	NA	NA
	7/19/2019	**0.631/0.632**	**0.341/0.348**	<0.250	**1.60/1.56**	NA	NA	NA	NA	NA	NA	NA	NA	NA	**198/189**	NA	NA	NA	NA
	12/11/2019	**0.940/1.010**	**0.346**	<0.250	<1.00/<1.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	**43.0/42.0**	NA	NA	NA	NA
	3/19/2020	<0.100/<0.100	<0.250/**0.258**	<0.250/<0.250	<1.00/<1.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1.97/2.06**	NA	NA	NA	NA
	5/28/2020	**0.256/0.256**	**0.269/0.259**	<0.250/<0.250	<1.00/<1.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	**9.27/9.92**	NA	NA	NA	NA
	9/23/2020	**1.790/1.570**	**0.795/0.785**	<0.250/<0.250	**1.56/1.45**	NA	NA	NA	NA	NA	NA	NA	NA	NA	**108/99.9**	NA	NA	NA	NA
	12/7/2020	**1.520/1.550**	**0.688/0.708**	<0.250/<0.250	**1.33/1.30**	NA	NA	NA	NA	NA	NA	NA	NA	NA	**121/121**	NA	NA	NA	NA
	12/9/2021	**0.0556 J/0.0494 J**	**0.218/0.185 J**	**0.230 J/0.240 J**	<1.00/<1.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	**4.17/4.23**	NA	NA	NA	NA

Table 2: Groundwater Analytical Results - Well NMW-1A
South Tacoma Field Site

Kennedy Jenks

Monitoring Well	Date Sampled	Volatile Organic Compounds (µg/L)										
		n-Propyl-benzene	1,2,4-Trichloro-benzene	1,2,3-Trichloro-benzene	Naphthalene	1,2-Dichloro-ethane	Chloroform	Chloro-benzene	Carbon tetrachloride	1,1,2-Trichloro-ethane	Acetone	2-Butanone (methyl ethyl ketone)
EPA Maximum Contaminant Level (MCL)		NE	70	NE	NE	5	80	100	5	5	NE	NE
ROD Cleanup Level		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
MTCA Method A		NE	NE	NE	160	5	NE	NE	NE	NE	NE	NE
MTCA Method B (non-carcinogen)		800	80	6.40	160	48	80	160	32	32	7,200	4,800
MTCA Method B (carcinogen)		NE	1.5	NE	NE	0.48	1.4	NE	0.63	0.77	NE	NE
Pioneer Builders Supply Monitoring Well												
NMW-1A	October 2001	**18/20**	<5.0/<5.0	<5.0/<5.0	**14/15**	NA	NA	NA	NA	NA	NA	NA
	October 2002	**45.2/34.7**	<1.00/<1.00	**3.14/<1.00**	**88.3/66.6**	NA	NA	NA	NA	NA	NA	NA
	12/29/2004	**1.65/1.73**	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	NA	NA	NA	NA	NA	NA	NA
	1/10/2006	**26.0/26.4**	**1.12/1.12**	<1.00/<1.00	**25.7/25.2**	NA	NA	NA	NA	NA	NA	NA
	1/11/2007	**14.1/15.0**	**3.03/3.19**	**2.20/2.22**	**54.4/57.4**	**<0.200/0.220**	NA	NA	NA	NA	NA	NA
	12/26/2007	**9.86/9.90**	**1.08/<1.00**	<1.00/<1.00	**7.64/7.21**	<0.200/<0.200	NA	<0.200	<0.200/<0.200	<0.200/<0.200	<10.0<10..0	<2.00/<2.00
	12/29/2008	**2.80/2.77**	<5.00/<5.00	<5.00/<5.00	<5.00/<5.00	<1.00/<1.00	NA	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<20.0/<20.0	<10.0/<10.0
	1/27/2010	**6.7/7.0**	**1.08/<1.00**	**<1.0/3.8**	**29/33**	<1.0/<1.0	<5.0/<5.0	<1.0/<1.0	<1.0/<1.0	<0.10/<0.10	NA	NA
	12/21/2010	**30.3/26.4**	**3.8/3.6**	<1.0/<1.0	**39.5/41.9**	<1.0/<1.0	**1.6/1.4**	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0	<5.0/<5.0	<5.0/<5.0
	1/25/2012	**9.1/9.4**	**3.7/3.7**	<1.0/<1.0	**8.6/8.5**	<1.0/<1.0	<5.0/<5.0	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0	<5.0/<5.0	<5.0/<5.0
	12/27/2012	**1.1/<1.0**	<1.0/<1.0	<1.0/<1.0	<5.0/<5.0	<1.0/<1.0	<5.0/<5.0	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0	<50./<50.	<10./<10.
	1/30/2014	**5.5/6.4**	**18/20**	**<1.0/1.1**	**24/24**	<1.0/<1.0	<5.0/<5.0	<1.0/<1.0	<1.0/<1.0	<1.0/<1.1	<50./<50.	<10./<10.
	12/19/2014	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0	<5.0/<5.0	<1.0/<1.0	<5.0/<5.0	<1.0/<1.0	<1.0/<1.0	<1.0/<1.0	<50./<50.	<10./<10.
	1/6/2016	<1.00/<1.00	**3.29 / 3.44**	**1.58 / 1.66**	<5.00/<5.00	<1.00/<1.00	<5.00/<5.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<50.0/<50.0	<10.0/<10.0
	12/6/2016	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<5.00/<5.00	<1.00/<1.00	<5.00/<5.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<50.0 J4/<50.0 J4	<10.0/<10.0
	12/4/2017	**5.00/4.18**	<1.00/<1.00	<1.00/<1.00	**9.32/5.54**	<1.00/<1.00	<5.00/<5.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<50.0/<50.0	<10.0/<10.0
	1/31/2019	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<5.00/<5.00	<1.00/<1.00	<5.00/<5.00	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	<50.0/<50.0	<10.0/<10.0
	5/22/2019	NA	**9.89/12.3**	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/19/2019	NA	**22.6/27.7**	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/11/2019	NA	**8.24/8.18**	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/19/2020	NA	<1.00/<1.00	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/28/2020	NA	**1.81/2.08**	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/23/2020	NA	<1.00/<1.00	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/7/2020	NA	17.4/17.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/2021	NA	**0.567 J**/<1.00	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

The day of the month samples were collected is presented where known.

Groundwater samples were analyzed for petroleum hydrocarbons using the Northwest total petroleum hydrocarbon (TPH) method for gasoline (NWTPH-Gx) and diesel and heavy oil (NWTPH-Dx).

mg/L = milligrams per liter

µg/L = micrograms per liter

Groundwater samples were analyzed for volatile organic compounds using the U.S. Environmental Protection Agency (EPA) Method 8260.

Bold indicates analyte was reported above the laboratory reporting limit.

Second result is the duplicate sample result.

Yellow shading indicates analyte was reported above the EPA Maximum Contaminant Level (MCL), ROD Cleanup Level, or MTCA Method A or B Cleanup Levels.

Grey shaded cleanup level indicates the lowest of the potentially applicable cleanup levels.

< = Analyte not reported above the indicated laboratory reporting limit.

NA = Not analyzed, or original laboratory reports were not available for review.

J = Concentration is an estimated value above the laboratory detection limit and less than the laboratory reporting limit.

EPA MCLs are provided in the Drinking Water Regulations under the Safe Drinking Water Act, as amended.

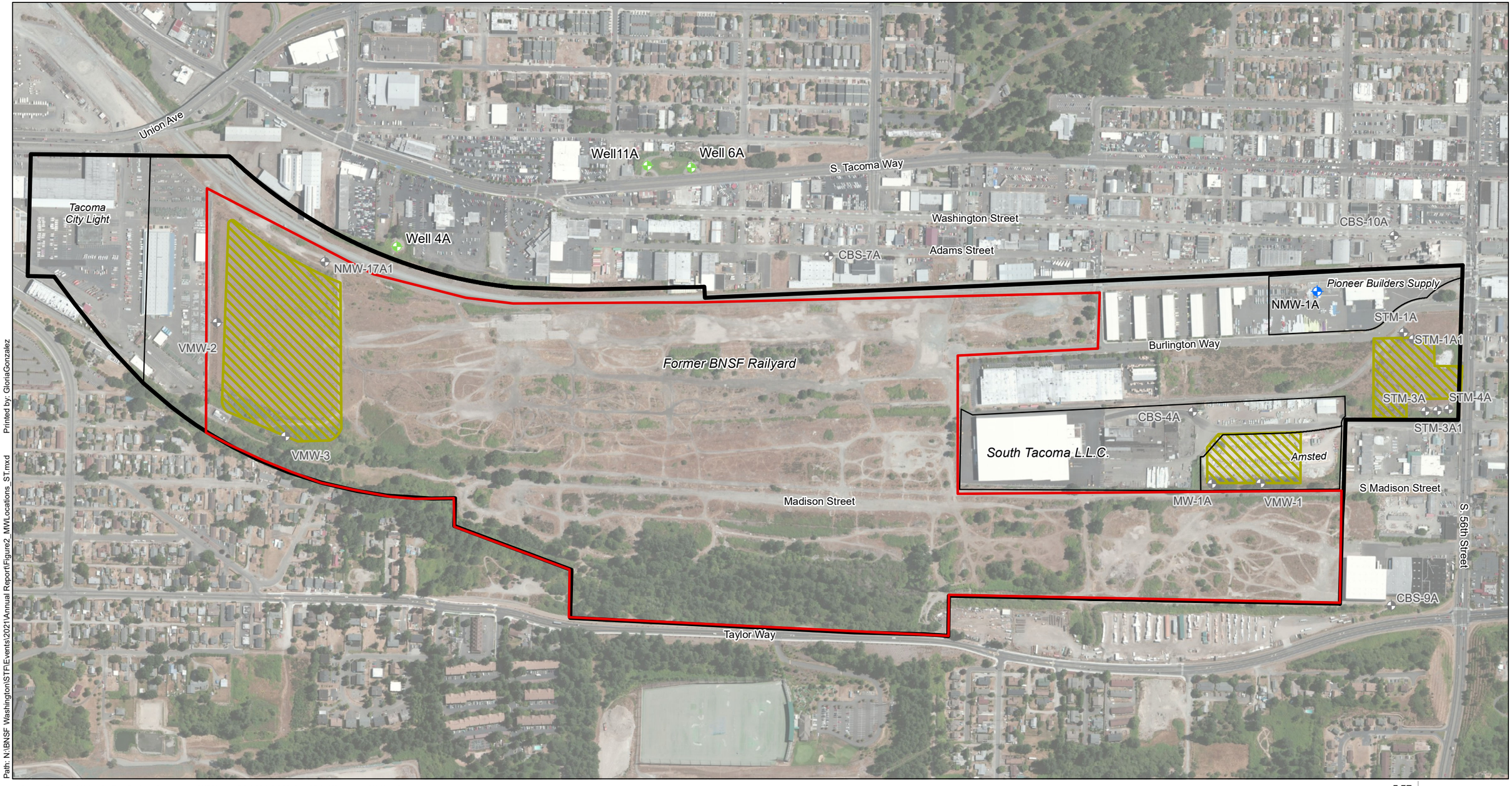
NE = Not Established. An EPA MCL, ROD Cleanup Level, or MTCA Cleanup Level has not been established for this chemical.

Record of Decision (ROD) Cleanup levels from Table 9-4 of the ROD.

Model Toxics Control Act (MTCA) Cleanup Levels from CLARC, updated July 2021.

Figures

Path: N:\BNSF Washington\STF\Events\2021\Annual Report\Figure2_MWLocations_ST.mxd Printed by: GloriaGonzalez



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Monitoring Well
- City Wells
- Decommissioned Monitoring Well
- Consolidation Area
- Area Boundaries
- Approximate STF OU Boundary
- Approximate Extent of Facility Sold to BRIDGE

Notes:

1. All locations are approximate.
2. STF = South Tacoma Field, OU = Operable Unit.
3. A portion of the Facility, as shown above, was sold to BRIDGE in 2021.

N

0 250 500

Scale: Feet

Kennedy Jenks

South Tacoma Field
Tacoma, Washington

Site Map and Monitoring Well Locations

February 2022

Figure 1

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Monitoring Well
- Decommissioned Monitoring Well

N

0 75 150

Scale: Feet

Kennedy Jenks

South Tacoma Field
Tacoma, Washington

Pioneer Builder Supply
Monitoring Well Locations

February 2022

Figure 2

Cap Inspection Report

December 2021

OPERATION AND MAINTENANCE INSPECTION REPORT FORM
SOUTH TACOMA FIELD SITE

Inspection Date: ***December 9, 2021***

Personnel: ***Gloria Gonzalez & Robert Ardissiono***

ITEM	ITEMS TO MEASURE OR NOTE	OBSERVATION CONDITIONS/ MEASUREMENT	
1. Amsted Property Cover System			
Dead/damaged vegetation	If present, where?	Surface and vegetation cover on slope/swale appear intact. Vegetation not covering area where vehicles are driven.	No corrective action required at this time
Settlement/ponding	If present, where?	Minor ponding is present locally, but with recent precipitation.	No corrective action required at this time
Side slopes sliding	If present, where?	None noted during inspection.	No corrective action required at this time
Seismic activity damage	If present, where?	None noted during inspection.	No corrective action required at this time
2. Amsted Property Drainage System			
Swales	Range of depth of sediment accumulation. Area and depth of high sediment build-up.	No evident accumulation. Vegetation cover is generally intact and thick.	No corrective action required at this time
3. Amsted Property Site Security			
Fences	Location of deterioration or vandalism	Fences and gates are currently secure and functional.	No corrective action required at this time
Gates	Are gates operable?	Gate is functional and is secured with a chain and lock.	No corrective action required at this time
Locks	Missing or not functioning?	None noted during inspection.	No corrective action required at this time
Signs	Signs destroyed or vandalized?	None noted during inspection.	No corrective action required at this time
4. BNR Dismantling Yard Cover System - Portion of Facility Sold to BRIDGE in 2021			
Settlement/ponding	If present, where?	N/A - Not Inspected	N/A - Not Inspected
Fissures	If present, where?	N/A - Not Inspected	N/A - Not Inspected
Side slopes sliding	If present, where?	N/A - Not Inspected	N/A - Not Inspected
Seismic activity damage	If present, where?	N/A - Not Inspected	N/A - Not Inspected
5. BNR Dismantling Yard Drainage System - Portion of Facility Sold to BRIDGE in 2021			
Swales	Range of depth of sediment accumulation. Area and depth of high sediment buildup.	N/A - Not Inspected	N/A - Not Inspected

Note: Photographs of site conditions included? No ☐ Yes ☑

OPERATION AND MAINTENANCE INSPECTION REPORT FORM
SOUTH TACOMA FIELD SITE

Inspection Date: ***December 9, 2021***

Personnel: ***Gloria Gonzalez & Robert Ardissiono***

ITEM	ITEMS TO MEASURE OR NOTE	OBSERVATION CONDITIONS/ MEASUREMENT	
6. BNR Dismantling Yard Security - Portion of Facility Sold to BRIDGE in 2021			
Fences, gates, locks, and signs.	Damaged, missing, inoperable?	N/A - Not Inspected	N/A
7a. Other Cover Systems - Grids 452, 453, 460, 461, 493, 494, 500, 501, 520, 532, 533, 538, 550, 554, 586, 703, 767, 785, 879 - Portion of Facility Sold to BRIDGE in 2021			
Dead/damaged vegetation	If present, where?	N/A - Not Inspected	N/A - Not Inspected
Settlement / Ponding	If present, where?	N/A - Not Inspected	N/A - Not Inspected
Fissures	If present, where?	N/A - Not Inspected	N/A - Not Inspected
Side slopes sliding / Erosion	If present, where?	N/A - Not Inspected	N/A - Not Inspected
Seismic activity damage	If present, where?	N/A - Not Inspected	N/A - Not Inspected
7b. Other Cover Systems - BNSF Grids 791, 1101, 1104, and 1392			
Dead/damaged vegetation	If present, where?	Grid surfaces are generally in similar condition to the previous inspection, and cover is adequate. Grids 1101, 1104, and 1392 - Paved with minimal vegetation present and has high vehicle traffic. Grid 791- Vegetation not covering area where vehicles are driven.	No corrective action required at this time
Settlement / Ponding	If present, where?	None noted during inspection.	No corrective action required at this time
Fissures	If present, where?	None noted during inspection.	No corrective action required at this time
Side slopes sliding / Erosion	If present, where?	None noted during inspection.	No corrective action required at this time
Seismic activity damage	If present, where?	None noted during inspection.	No corrective action required at this time
8. Other Areas Drainage System - Grids 899, 900, 907, 908, 909, 911			
Settlement / Ponding	If present, where?	No settlement or ponding noted. Minor ponding noted locally. The perimeter of area is blocked with Ecology blocks and fences.	No corrective action required at this time
Drainage at the southern section of the BNR Railyard	Range of depth of sediment accumulation. Area and depth of high sediment buildup.	No significant sediment accumulation noted.	No corrective action required at this time
	Ponding, blocked drainage	No settlement noted.	No corrective action required at this time
9. Groundwater Monitoring Wells			
Damage/Vandalism	Which wells?	Monitoring wells NMW-10A, NMW-17A, STM-1A1 and STM-3A1 were decommissioned in July 2021. Monitoring well NMW-1A1 is in good condition.	No corrective action required at this time
10. Grid Markers			
Damage/Vandalism	Which markers?	Markers 899, 900, 907, 908, 909, and 911 were mostly easy to locate. Markers 791, 1101, 1104, and 1392 were not located.	An attempt to find the grid markers 791, 1101, 1104, and 1392 will be made during the June 2023 inspection. No other corrective action required at this time.
11. Other			
Site access		Fence breaks continue to be an ongoing issue. The Proctor Street access gate and fence were broken and flattened and require repair. The perimeter fence appear to be generally intact.	Waste accumulation and off-road driving have been an ongoing issue at the site similar to the previous inspection. The fence and gates appear to have generally mitigated these problems, but accumulation of waste is still evident locally, as well as fence destruction. Continue to monitor fence conditions.